REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested in view of the following remarks.

Summary of the Office Action

The drawings stand objected to.

The specification stands objected to.

The title stands objected to.

Claims 7, 9, 17 and 19 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

Claims 1-10 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Kim et al.* (U.S. Patent No. 6,100,954).

Claims 11-20 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Applicant's prior art Figures 1 and 2* in view of *Kim et al.* as applied to claims 1-10.

Summary of the Response to the Office Action

A Request for Approval of Drawing Changes is submitted herewith. Applicant has amended the title and the specification by this amendment. Claims 2, 6 and 16 have been canceled without prejudice or disclaimer. Claims 1, 3-5, 7-12 and 17-20 have been amended. Claims 21-37 have been newly added. Accordingly, claims 1, 3-5, 7-15 and 17-37 are currently pending.

Objection to the Drawings

The drawings stand objected to and the Office Action alleges that Figures 1 and 2 should be designated by a legend such as --Prior Art--. In a Request for Approval of Drawing Changes submitted herewith, Applicant has submitted new sheets proposing that the legend "Related Art" be added to Figures 1 and 2, since Figures 1 and 2 are described in the Related Art section of the original disclosure. See the section beginning at page 1, line 13 of the specification. Accordingly, the Examiner's approval of the proposed changes and withdrawal of the objection to the drawings are respectfully requested.

Objection to the Specification

The disclosure stands objected to because of informalities. Applicant has amended the specification to address the Examiner's concerns. Accordingly, Applicant respectfully requests that the objection to the disclosure be withdrawn.

Objection to the Title

The title stands objected to for being not descriptive. Applicant has amended the title in accordance with the Examiner's suggestion. Accordingly, Applicant respectfully requests that any objection to the title be withdrawn.

Claim Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 7, 9, 17 and 19 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite because claims 7 and 17 recite the term "high", which allegedly is a relative term and claims 9 and 19 recite the term "low", which allegedly is also a relative term. Applicant has amended claims 7, 9, 17 and 19 by removing these terms to address the Examiner's concerns.

Applicant respectfully submits that claims 7, 9, 17 and 19, as amended, fully comply with the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, Applicant respectfully requests that the rejection of claims 7, 9, 17 and 19 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claim Rejections under 35 U.S.C. §§102(e) & 103(a)

Claims 1-10 stand rejected under 35 U.S.C. §102(e) as being anticipated by *Kim et al.* Claims 11-20 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Applicant's Figures 1 and 2* in view of *Kim et al.* as applied to claims 1-10.

Because claims 2, 6 and 16 have been canceled without prejudice or disclaimer, the rejections of claims 2, 6 and 16 are rendered moot.

With respect to claims 1, 3-5, 7-15 and 17-20, to the extent that these rejections might be re-applied to these claims as newly-amended, they are respectfully traversed for at least the following reasons.

Applicant respectfully submits that the applied *Kim et al.* and the alleged *Applicant's prior art Figures 1 and 2* references, whether taken singly or combined, do not teach or suggest every feature of at least independent claims 1 and 11, as newly-amended. For instance, neither *Kim et al.* nor the alleged *Applicant's prior art Figures 1 and 2* teaches or suggests the claimed combinations comprising, *inter alia*, "an organic semiconductor layer made of an organic semiconductor and mounded on the insulative film" and "a pair of opposing gate electrodes sandwiching the insulative film and the organic semiconductor layer" as set forth in newly-

amended independent claims 1 and 11. See page 27, lines 18-22 of the instant specification, for example, for a discussion of the organic semiconductor layer.

In contrast to the claimed invention as a whole, *Kim et al.* discloses a conventional thin film transistor. Specifically, *Kim et al.* teaches a transistor comprising a semiconductor layer (119) being made of an inorganic semiconductor, i.e., silicon. No portion of *Kim et al.*'s disclosure discusses an organic semiconductor layer as recited in at least claims 1 and 11. In the rejections, the Office Action makes reference to the organic thin film (159) taught by *Kim et al.* However, *Kim et al.* merely teaches the organic thin film (159) as a protection film, such that the protection film (159) does not function as a semiconductor layer in the transistor. See column 13, line 1-column 15, line 65 and column 22, lines 13-14 of *Kim et al.* Thus, it is respectfully submitted that *Kim et al.* does not teach or suggest at least an organic semiconductor layer made of an organic semiconductor and mounded on the insulative film, as set forth in Applicant's newly-amended claimed combinations.

Also, in the rejections, the Office Action appears to allege that the electrodes (113, 131) taught by *Kim et al.* correspond to Applicant's claimed pair of opposing gate electrodes. However, *Kim et al.* merely teaches electrode (131) as a pixel electrode, and not as a gate electrode. See, for example, column 15, lines 62-65 of *Kim et al.* Thus, it is respectfully submitted that *Kim et al.* does not teach or suggest a pair of opposing gate electrodes sandwiching the insulative film and the organic semiconductor layer as set forth in Applicant's newly-amended claimed combinations.

MPEP § 2131 states "[t]o anticipate a claim, the reference must teach every element of the claim." Since *Kim et al.* fails to teach each and every element as set forth in at least independent claim 1, it is respectfully submitted that *Kim et al.* does not anticipate claim 1. Further, since claims 3-5 and 7-10 depend from claim 1, it is respectfully submitted that *Kim et al.* also does not render claims 3-5 and 7-10 unpatentable. Accordingly, withdrawal of the rejection of claims 1, 3-5 and 7-10 under 35 U.S.C. §102(e) is respectfully requested.

Further, it is respectfully submitted that *Applicant's prior art Figures 1 and 2*, to the extent it is alleged as prior art, also fail to teach or suggest "an organic semiconductor layer made of an organic semiconductor and mounded on the insulative film" or "a pair of opposing gate electrodes sandwiching the insulative film and the organic semiconductor layer" as set forth in Applicant's newly-amended claimed combinations.

MPEP §2143.03 instructs that "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)." Since *Kim et al.* and the alleged *Applicant's prior art Figures 1 and 2*, whether taken alone or in combination, fail to teach or suggest each and every element set forth in independent claim 11, it is respectfully submitted that the combination of *Kim et al.* and the alleged *Applicant's prior art Figures 1 and 2* does not render claim 11 unpatentable. Further, since claims 12-15 and 17-20 depend from claim 11, it is respectfully submitted that the combination of *Kim et al.* and the alleged *Applicant's prior art Figures 1 and 2* also does not render claims 12-15 and 17-20 unpatentable. Accordingly, withdrawal of the rejection of claims 11-15 and 17-20 under 35 U.S.C. §103(a) is respectfully requested.

New Claims 21-37

Applicant has added new claims 21-37 to further define the invention. Applicant respectfully submits that claims 21-37 are allowable over the applied art of recrod.

Conclusion

In view of the foregoing, withdrawal of the rejections and allowance of the pending claims are earnestly solicited. Should there remain any questions or comments regarding this response or the application in general, the Examiner is urged to contact the undersigned at the number listed below.

Attached hereto is a marked-up version of the changes made by the current amendment. The attachment is captioned "Version with markings to show changes made."

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE TITLE:

The title has been amended as follows.

SWITCHING ELEMENT HAVING INSULATIVE FILM AND ORGANIC FILM AND [ELECTROLUMINESCENCE] ELECTROLUMINESCENT ELEMENT DISPLAY DEVICE

IN THE SPECIFICATION:

The two paragraphs beginning at page 4, line 1 have been amended as follows.

For providing a larger screen size for a display device, organic EL display devices driven in an active matrix driving mode are contemplated in addition to those of the simple matrix driving mode. The display device of this mode is such one that replaces the anode lines and cathode lines with scanning signal lines [16] and data signal lines [13], respectively, and thin film transistors (TFT) are used for switching elements arranged at respective intersections. Respective pixels are applied with currents by switching associated thin film transistors, causing organic EL elements to emit light. For TFT, an element made of p-Si, a-Si can be employed. Alternatively, MOS-FET (Metal Oxide Semiconductor Field Effect Transistor) may be used to form TFT.

For example, with MOS-FET as a switching element, two reverse conducting regions are formed on a semiconductor substrate, for example, a Si substrate [2]. A silicon oxide (SiO_2) thin film and a metal gate electrode are sequentially deposited on the surface of the substrate between the inverse conductive regions. The conductivity on the surface of the substrate is controlled by

an electric field applied from the metal gate. Therefore, a Si wafer is required for a display substrate, and a semiconductor substrate is required for a polysilicon substrate and so on. In addition, since an inorganic material must be deposited on such substrates, high temperature processes are typically used for its manufacturing.

IN THE CLAIMS:

Claims 2, 6 and 16 have been canceled without prejudice or disclaimer.

Claims 1, 3-5, 7-12 and 17-20 have been amended as follows.

1. (Amended) An organic thin film switching element comprising:

an insulative film;

an organic [thin film] semiconductor layer made of an organic [material,] semiconductor and mounded on the insulative film [and the organic thin film being laminated one over the other];

a pair of opposing gate electrodes sandwiching [a laminate composed of] the insulative film and the organic [thin film] semiconductor layer; and

an intermediate electrode disposed [between] within the organic [thin film] semiconductor layer [and the insulative film].

3. (Amended) An organic thin film switching element according to claim [2] 1, wherein the organic [material] semiconductor has a hole transport property.

4. (Amended) An organic thin film switching element according to claim [2] 1, wherein the organic [material] semiconductor has an electron transport property.

5. (Amended) An organic thin film switching element according to claim [2] 1, wherein the organic [material] semiconductor has a hole and electron transport property.

7. (Amended) An organic thin film switching element according to claim 1, wherein the intermediate electrode [and the gate electrode for injecting carriers of the organic thin film switching element are] is made of a material having a [high] work function [in a case that the carriers are holes] to facilitate movements of holes between the electrodes and the organic semiconductor layer.

8. (Amended) An organic thin film switching element according to claim 7, wherein the intermediate electrode [of the organic thin film switching element] comprises a laminate including a first layer made of a material having a work function substantially equal to that of the organic [thin film] semiconductor layer, and a second layer made of a material having a work function lower than that of the first layer.

9. (Amended) An organic thin film switching element according to claim 1, wherein the intermediate electrode [and the gate electrode for injecting carriers of the organic thin film

switching element are] is made of a material having a [low] work function [in a case that the carriers are electrons] to facilitate movements of electrons between the electrodes and the organic semiconductor layer.

10. (Amended) An organic thin film switching element according to claim 9, wherein the intermediate electrode of the organic thin film switching element comprises a laminate including a first layer made of a material having a work function substantially equal to that of the organic [thin film] semiconductor layer, and a second layer made of a material having a work function higher than that of the first layer.

11. (Amended) An organic electroluminescence element display device having a display array formed of a plurality of light emitting sections, comprising:

a substrate having a plurality of first display electrodes formed on a surface in correspondence to the light emitting sections;

an organic material layer formed on each of the first display electrodes and including at least one organic electroluminescence material layer capable of emitting light by injecting electrons or holes thereinto;

a second display electrode formed in common on the organic material layer; and

an organic thin film switching element formed on the substrate and connected to at least one of the first and second display electrodes, the organic thin film switching element including:[;]

a insulative film;

an organic [thin film] semiconductor layer made of an organic [material,] semiconductor and mounded on the insulative film [and the organic thin film being laminated one over the other];

a pair of opposing gate electrodes sandwiching [a laminate composed of] the insulative film and the organic [thin film] semiconductor layer; and

an intermediate electrode disposed [between] within the organic [thin film] semiconductor layer [and the insulative film].

12. (Amended) An organic electroluminescence element display device according to claim 11, wherein the organic [thin film] semiconductor layer [made of an organic material of the organic thin film switching element] is formed of a portion of the organic material layer.

17. (Amended) An organic electroluminescence element display device according to claim 11, wherein the intermediate electrode [and the gate electrode for injecting carriers of the organic thin film switching element are] is made of a material having a [high] work function [in a case that the carriers are holes] to facilitate movements of holes between the electrodes and the organic semiconductor layer.

18. (Amended) An organic electroluminescence element display device according to claim 17, wherein the intermediate electrode of the organic thin film switching element

comprises a laminate including a first layer made of a material having a work function substantially equal to that of the organic [thin film] semiconductor layer, and a second layer made of a material having a work function lower than that of the first layer.

19. (Amended) An organic electroluminescence element display device according to claim 11, wherein the intermediate electrode [and the gate electrode for injecting carriers of the organic thin film switching element are] is made of a material having a [low] work function [in a case that the carriers are electrons] to facilitate movements of electrons between the electrodes and the organic semiconductor layer.

20. (Amended) An organic electroluminescence element display device according to claim 19, wherein the intermediate electrode of the organic thin film switching element comprises a laminate including a first layer made of a material having a work function substantially equal to that of the organic [thin film] semiconductor layer, and a second layer made of a material having a work function higher than that of the first layer.

Claims 21-37 have been newly added.